

IN THE CLAIMS

Please cancel claim 26 without prejudice.

Kindly amend the claims as follows:

13. (Amended) An apparatus as defined in claim 12, wherein said switch module further includes:

a switch engine that determines whether said first and third address resolution records exist in said address resolution record table when said [first] layer 2 flow is detected, and whether said second and fourth address resolution records exist in said address resolution record table when said [second] layer 3 flow is detected; and

a CPU interface that sends a first message to said CPU when said [first] layer 2 flow is detected and said switch engine determines that said first and third address resolution records do not exist in said address resolution record table, said CPU interface sends a second message to said CPU when said [second] layer 3 flow is detected and said switch engine determines that said second and fourth address resolution records do not exist in said address resolution record table, said CPU creating said first and third address resolution records in response to said first message, and said second and fourth address resolution records in response to said second message.

15. (Amended) An apparatus as defined in claim 14, wherein said layer 2 flow is in accordance with all protocols except IP and IPX[.].

25. (Amended) A method of forwarding packets between ports of a switch, said ports being associated with hosts having addresses, said method comprising:

identifying a first address of a first one of said hosts;  
 identifying a first port associated with said first host;  
 creating a record that corresponds said first address with said first port;  
 storing said record in a table;  
 linking said record to a hash;  
 associating said hash with a portion of said first address;  
 receiving a data packet at a second port;  
 extracting said first address from said data packet;  
 retrieving said record by hashing onto said table using said portion of said first address; and  
 forwarding said data packet to said first port in accordance with said record;  
corresponding a swap address with said record;  
receiving a second data packet at a third port;  
routing said second data packet by forwarding said second data packet to said third  
port in accordance with said record and swapping a second address, the second address  
within said second data packet, with said swap address in accordance with said record.

27. (Amended) A method as defined in claim 25, further comprising:

identifying a [second] third address of a second one of said hosts, said second port  
associated with said second host;

[identifying a second port associated with said second host;]

creating a second record that corresponds said [second] third address with said second port;

storing said second record in said table;

linking said second record to said hash;

associating said hash with a portion of said [second] third address;  
sorting said first and second records in said table based on said first and [second] third addresses;  
receiving a [second] third data packet at [a second] the first port;  
extracting said [second] third address from said [second] third data packet;  
retrieving said second record by hashing onto said table using said portion of said [second] third address and searching among said first and second records based on said [second] third address; and  
forwarding said third data packet to said second port in accordance with said second record.

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29. (Amended). A method of forwarding packets between ports of a switch, said ports being associated with hosts having one or more of an Ethernet address, an IP address, an IPX address, and a socket number, said method comprising:

preparing a flow table comprising a plurality of records;

receiving a first packet at a first port;

extracting a protocol identifier from said first packet;

if said protocol identifier is IP or IPX:

determining whether said first packet needs to be switched within the same network or routed between different networks;

if said first packet needs to be switched, switching said first packet between said first port and a second port based on a first record from said flow table and one of said IP or IPX address of said first packet; and

if said first packet needs to be routed, routing said first packet between said first port and a third port based on a second record from said flow table and one of said IP or IPX address of said first packet; and

if said protocol identifier is not IP or IPX:

switching said first packet between said first port and a [third] fourth port based on a third record from said flow table and said Ethernet address of said first packet.

96 35. (Amended) A method as defined in claim 34, wherein said layer 2 flow is in accordance with all protocols except IP and IPX[.].

Kindly add the following new claim:

44. (New Claim) An apparatus for forwarding packets between ports, said ports associated with hosts having one or more of a layer 2 address, a layer 3 address and a socket number, said apparatus comprising:

a flow table having a plurality of records;

a switch module coupled to said ports and said flow table, said switch module comprising:

means for detecting layer 2 flow arriving from a first host and for forwarding a first packet between the first host and a second host in accordance with a first record in said flow table and said layer 2 addresses of said first and second hosts,

means for detecting layer 3 flow arriving from a third host and for forwarding a second packet between the third host and a fourth host in accordance with a second record in said flow table and said layer 3 addresses of said third and fourth hosts, and